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1307520 COMPLETE SPECIFICATION  
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Sheet 1

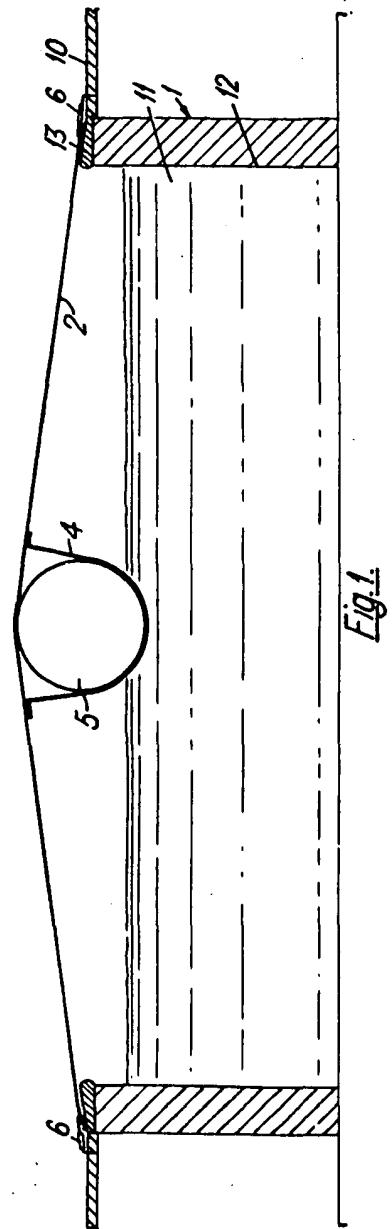


Fig. 1

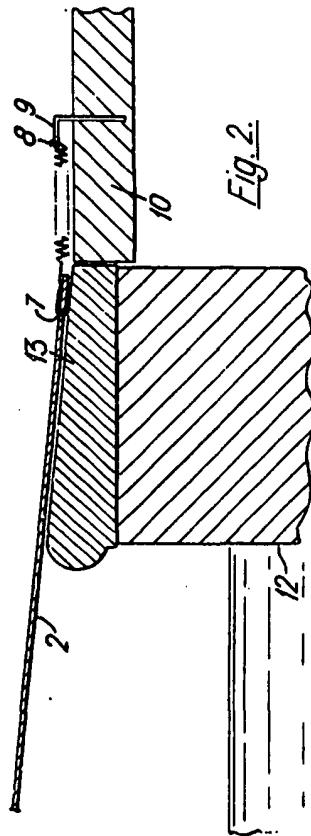


Fig. 2

1307520 COMPLETE SPECIFICATION

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Sheet 2

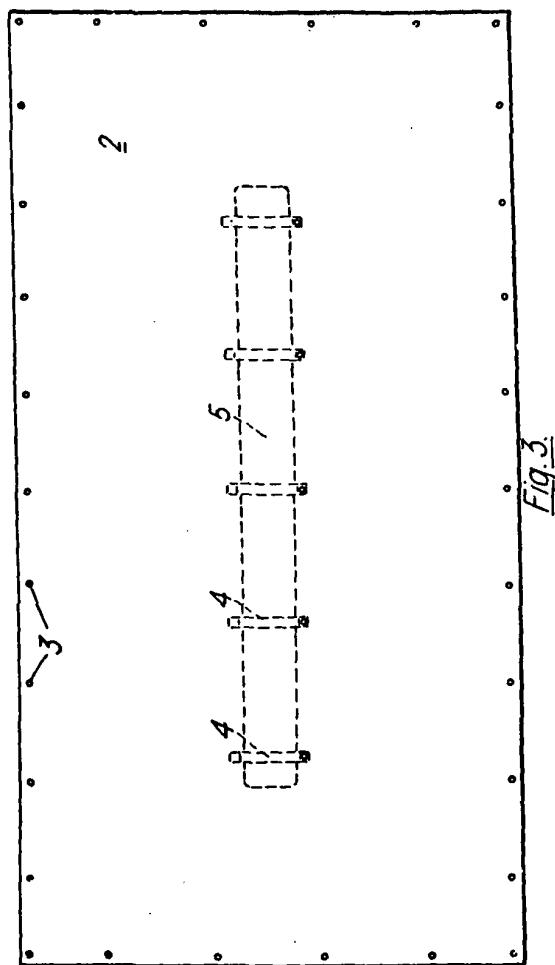


Fig. 3.

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# PATENT SPECIFICATION

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1 307 520

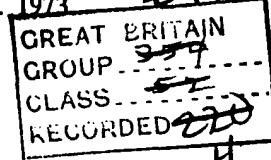
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## DRAWINGS ATTACHED

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(19)



## (54) IMPROVEMENTS IN OR RELATING TO PROTECTIVE MEANS FOR SWIMMING POOLS AND OTHER LIQUID CONTAINERS

- (71) We, S. BOOTH HORROCKS & SON LIMITED, a British Company of Oak Street, Northampton, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—  
 This invention concerns improvements in or relating to protective means for swimming pools and other liquid containers, for example, tanks, reservoirs and the like.  
 It is a drawback of existing outdoor swimming pools that foreign matter, for example leaves and dust, is liable to contaminate the water contained thereby whilst, in the absence of appropriate drainage or in the case when an existing system has been blocked by the ingress of leaves, dust or other foreign matter into the water, rain water impinging upon the water in the swimming pool can cause the pool to overflow.

It is an object of the present invention to provide means to overcome the aforesaid disadvantage of known swimming pools and other liquid containers, and to provide protective covers generally.

According to the present invention there is provided protective means for swimming pools and other liquid containers, such means comprising a foldable cover of such dimensions as to span an area of liquid to be covered, and at least one support adapted to float on, and support the said cover in a self-draining position above the liquid, the on each said support being in the form of a body that may be inflated and deflated so that, when desired, the protective means may be stowed away compactly, and the said cover having an edge portion remote from the or each said support and free from any other floatable support for securing to the periphery of the area to be spanned.

If desired the or each said support may

[Price 25p]

be made integrally with the said cover, but desirably it comprises a separate unit adapted to be releasably secured to the said cover.

The or each said support may be of any desired shape, for example, spherical or cylindrical. Thus, for example, the support may be in the form of a cylindrically-shaped boom, or in the form of one or more spheres.

Preferably the or each support is such that the whole cover is in use supported above the ground or other area to be covered, for example, the liquid level in the pool or other container.

Where the said support or supports is or are made separately from the cover, the means by which the or each support is desirably adapted to be releasably secured to the cover will depend to some extent on the shape of the support or supports. Thus, for instance, the releasable means may comprise one or more straps, toggles or retaining meshes. If desired, the support or supports and/or cover may include anchorage points, for example, loops, hooks or the like to which the securing means may be attached.

According to a still further feature of the invention the edge portion of the said cover may be provided with means for anchoring the cover to the periphery of the area to be covered, for example to the pool surround or other liquid container. Conveniently such anchoring means when provided incorporate tensioning means, conveniently spring tensioning means, so that the cover may be tensioned.

The said cover may be made of any suitable material, but is desirably flexible and waterproof. It may be made from a single sheet of material or from one or more pieces suitably joined together, for example by stitching, welding or the like.

In order that the invention may be more

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readily understood one embodiment thereof together with a modification will now be described by way of example and with reference to the accompanying drawings in which :

FIGURE 1 is a vertical section through one embodiment of the protective means of the invention as used in connection with an outdoor swimming pool;

10 FIGURE 2 is an enlarged view showing the cover anchoring means of Figure 1; and

FIGURE 3 is a plan view of the protective means of Figures 1 and 2.

In this embodiment the protective means 15 of the invention are intended to be used in connection with an outdoor swimming pool generally indicated at 1, rectangular in plan and having internal dimensions of approximately 15' X 30'.

20 The cover 2 comprises a rectangular sheet of plastics material, for example the material sold under the Trade Mark PLASTOLENE, which sheet is 17' X 31' 10", the free edge portions of the rectangular sheet being provided at spaced intervals with brass grommet eyelets 3 set in reinforced tabs.

The cover 2 further comprises five rectangular 3" wide straps 4 manufactured 30 from the material known under the Trade Mark PLASTOLENE and the free ends of which straps are welded to the underside of the sheet comprising the cover, the ends of each strap being located one on each 35 side of the central longitudinal line of the cover and the straps being in parallel spaced relationship to each other.

The straps 4 are adapted releasable to 40 secure to the cover a floatable support 5 in the form of a cylindrical inflatable, bolster-like boom approximately 20' long and having a diameter of approximately 23" when inflated. The boom comprises two strips of air impervious, plastics material 45 20' long X 36" wide, the two strips being welded together along their longitudinal edges to form a tube and circular discs of the said plastics material being welded one to each end of the tube thus formed. 50 (Alternatively, for example, one or both ends of the tube may be closed by bringing the material at the or each end together and welding it.)

The inflatable support 5 thus formed is 55 adapted to be inflated with air introduced through an appropriate valve or valves (not shown). If desired, the inflatable support may be partitioned into compartments each compartment between two partitions or between a partition and an end wall being adapted to be separately inflated through an appropriate valve.

The inflatable support is adapted to be held against the cover by the straps 4 60 through which it is slung so that the boom

extends centrally of the cover with its longitudinal axis parallel to and spaced by the radius of the cross-section of the inflatable support from the top of the cover, so that there is a fixed fall on the cover.

70 The protective means of this embodiment of the invention further comprise anchoring means in the form of a number of spring tensioning units generally indicated at 6, one end 7 of each of which is adapted to be engaged with one of the eyelets 3 in the rectangular cover 2 and the other end 8 of which is provided with a hook or the like for releasable engagement with an anchoring point 9 in the form of a loop or 80 the like, the loops or the like being provided at suitable locations in, for example, the patio paving 10 surrounding the swimming pool 1.

85 When the swimming pool is not in use, the inflatable support 5 is inflated, and floated on the water 11 in the pool 1, the cover 2 being supported above the level of the water in the pool and being tensioned across the pool by the tensioning units 6 so that it wholly spans the inner peripheral wall 12 of the pool with its edge portions remote from the support 5 (and which are free from any other flexible support) 90 overlapping partially the surround 13 of the pool.

90 The provision of the said protective means prevents the ingress of leaves, dust, rain water or the like into the swimming pool when the latter is not in use, the sides of the cover sloping downwardly from the support towards the aforesaid anchorage points so that the cover is self-draining, that is water or the like impinging on the top surface of the cover drains therefrom. Moreover, the protective means also serves to reduce heat loss from the surface of the water of the pool when the ambient temperature falls, for example, at night-time or when a heated pool is not in use and the heating has been switched off.

100 When it is desired to remove the protective means, this is easily done by releasing the spring tensioning units 6 from their anchoring points 9, following which the cover 2 may be removed from the pool and the inflatable support 5 deflated so that the cover may be folded and stowed away.

105 In a modification of the above described embodiment, the inflatable support comprises, instead of a cylindrical boom, one or more inflatable spheres, for example either a single pressurised sphere adapted to be supported (by one or more appropriate straps, toggles or the like) centrally of the 115 said cover, or a number of spheres symmetrically located serving to support the cover but still leaving edge portions remote from the supports for securing to the periphery of the area to be spanned.

It will be appreciated that the protective means of the invention also provide a safety factor in that the presence of the cover when in position spanning a pool serves to prevent a child accidentally entering the water.

When the protective means of the above described embodiment of the invention is not being used in relation to pools, it will be appreciated that the protective means 10 may be located on solid surfaces, for example, tennis courts or the like, as a protection from the weather.

**WHAT WE CLAIM IS:-**

1. Protective means for swimming pools 15 and other liquid containers, such means comprising a foldable cover of such dimensions as to span an area of liquid to be covered, and at least one support adapted to float on, and support the said cover in a 20 self-draining position above, the liquid, the or each said support being in the form of a body that may be inflated and deflated so that, when desired, the protective means may be stowed away compactly, and the said 25 cover having an edge portion remote from the or each said support and free from any other floatable support for securing to the periphery of the area to be spanned.

2. Protective means according to claim 30 1, wherein the said support is made integrally with the said cover.

3. Protective means according to claim 1, wherein the said support comprises a 35 separate unit adapted to be releasably secured to the said cover.

4. Protective means according to claim 3, wherein the or each support is adapted to be releasably secured to the cover by one or more straps, toggles or retaining 40 meshes.

5. Protective means according to claim 4, wherein the support or supports and/or the said cover include anchorage points, for example, loops, hooks or the like to which the securing means may be attached.

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6. Protective means according to any one of the preceding claims, wherein the said support is in the form of a cylindrically shaped boom.

7. Protective means according to any one 50 of claims 1 to 5, wherein the said support is in the form of one or more spheres.

8. Protective means according to any one of the preceding claims, wherein the said edge portion of the said cover is provided 55 with holes for use in anchoring the cover to the periphery of the area to be covered.

9. Protective means according to claim 8, and including anchoring means engaging or adapted to engage in the said holes and 60 incorporating tensioning means so that the said cover may be tensioned.

10. Protective means substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings. 65

11. Protective means according to claim 10, modified substantially as hereinbefore described.

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